

IN THE CLAIMS:

1. (Currently Amended) A plasma display panel comprising:

a first substrate;

a second substrate which opposes the first substrate across a discharge space, the first and second substrates being sealed around a perimeter thereof; and

5 a protective layer formed on the first substrate, including a first crystal and a second crystal, the first crystal having different electron emission properties than the second crystal, wherein at the surface of the protective layer the second crystal is dispersed throughout the first crystal, and the second crystal and the first crystal are exposed to the discharge space.

2. (Cancelled)

3. (Previously Presented) The plasma display panel of claim 1, wherein the second crystal is of higher purity than the first crystal.

4. (Previously Presented) The plasma display panel of claim 1, wherein the protective layer is formed mainly from MgO, and the second crystal is formed from fine MgO crystalline particles.

5. (Original) The plasma display panel of claim 4, wherein the first crystal is obtained by baking an MgO precursor.

6. (Original) The plasma display panel of claim 4, wherein the second crystal is oxygen rich MgO.

7. (Previously Presented) The plasma display panel of claim 1, wherein in the protective layer, at least the second crystal is doped with one or more members selected from the group consisting of Si, H, and Cr.

8 - 28. (Cancelled)

29. (Previously Presented) The plasma display panel of claim 4, wherein the first crystal has a growth structure characteristic of at least a vacuum deposition, an electron beam deposition or a sputtering process.

30. (Previously Presented) The plasma display panel of claim 1, wherein the first crystal has a growth structure characteristic of a thin film technique.

31. (Previously Presented) The plasma display panel of claim 3, wherein the first crystal has a growth structure characteristic of a thin film technique.

32. (Previously Presented) The plasma display panel of claim 4, wherein the first crystal has a growth structure characteristic of a thin film technique.

33. (Previously Presented) The plasma display panel of claim 1, wherein the second crystal is formed from particles of several dozen to several hundred nanometers in size.

34. (Previously Presented) The plasma display panel of claim 3, wherein the second crystal is formed from particles of several dozen to several hundred nanometers in size.

35. (Previously Presented) The plasma display panel of claim 4, wherein the second crystal is formed from particles of several dozen to several hundred nanometers in size.

36. (Previously Presented) The plasma display panel of claim 1, wherein the second crystal is formed from a combination of materials.

37. (Previously Presented) The plasma display panel of claim 3, wherein the second crystal is formed from a combination of materials.

38. (Previously Presented) The plasma display panel of claim 4, wherein the fine MgO crystalline particles are formed from a suitable combination of materials.

39. (Previously Presented) A method of manufacturing a plasma display panel, comprising the steps of:

forming a first substrate;

5 forming a protective layer on the first substrate, including a first crystal and a second crystal of different electron emission properties exposed to the discharge space, the second crystal being dispersed throughout the first crystal at the surface of the protective layer; and

sealing the first substrate and a second substrate together via a discharge space with the protective layer facing into the discharge space, the first and the second substrates being sealed around a perimeter thereof, wherein

10 the protective layer is formed by way of mixing a second crystalline material in a first

crystalline material, applying the mixture to a surface of the first substrate, and baking the applied mixture.

40. (Previously Presented) The manufacturing method of claim 39, wherein an MgO precursor is used as the first crystalline material, and fine MgO crystalline particles are used as the second crystalline material.

41. (Previously Presented) A method of manufacturing a plasma display panel, comprising the steps of:

forming a first substrate;

5 forming a protective layer on the first substrate, including a first crystal and a second crystal of different electron emission properties exposed to the discharge space, the second crystal being dispersed throughout the first crystal at the surface of the protective layer; and

sealing the first substrate and a second substrate together via a discharge space with the protective layer facing into the discharge space, the first and the second substrates being sealed around a perimeter thereof, wherein

10 the first crystal is formed by way of a thin film technique.

42. (Previously Presented) A method of manufacturing a plasma display panel, comprising steps of:

forming a first substrate;

5 forming a protective layer on the first substrate, including a first crystal and a second crystal of different electron emission properties exposed to the discharge space, the second

crystal being dispersed throughout the first crystal at the surface of the protective layer; and

sealing the first substrate and a second substrate together via a discharge space with the protective layer facing into the discharge space, the first and second substrates being sealed around a perimeter thereof, wherein

10 the first crystal is formed at least by way of vacuum deposition, electron beam deposition or sputtering.

43. (Previously Presented) The method of manufacturing a plasma display panel of claim 41, wherein the first substrate and the second substrate are sealed together via a discharge space with the first crystal and the second crystal being exposed to the discharge space.

44. (Previously Presented) The method of manufacturing a plasma display panel of claim 42, wherein the first substrate and the second substrate are sealed together via a discharge space with the first crystal and the second crystal being exposed to the discharge space.

45. (Currently Amended) The method of manufacturing a plasma display panel of claim 41, wherein fine MgO crystalline particles are used as [[the]] a second crystalline material for the second crystal.

46. (Currently Amended) The method of manufacturing a plasma display panel of claim 42, wherein fine MgO crystalline particles are used as [[the]] a second crystalline material for the second crystal.

47. (Previously Presented) The method of manufacturing a plasma display panel of claim 40, wherein in the layer-forming step, at least the second crystalline material out of the first and second crystalline materials is doped with a member selected from the group consisting

of Si, H, and Cr.

48. (Previously Presented) The method of manufacturing a plasma display panel of claim 45, wherein in the layer-forming step, at least the second crystalline material out of the first and second crystalline materials is doped with a member selected from the group consisting of Si, H, and Cr.

49. (Previously Presented) The method of manufacturing a plasma display panel of claim 47, wherein in the layer-forming step, one of annealing and plasma doping is selected as a technique of doping at least the second crystalline material with H.

50. (Previously Presented) The method of manufacturing a plasma display panel of claim 48, wherein in the layer-forming step, one of annealing and plasma doping is selected as a technique of doping at least the second crystalline material with H.

51. (Previously Presented) The method of manufacturing a plasma display panel of claim 47, wherein in the layer-forming step, plasma doping using $\text{SiH}_{\text{sub.4}}$ or $\text{Si}_{\text{sub.2}}\text{H}_{\text{sub.6}}$ is performed as a technique of doping at least the second crystalline material with Si.

52. (Previously Presented) The method of manufacturing a plasma display panel of claim 48, wherein in the layer-forming step, plasma doping using $\text{SiH}_{\text{sub.4}}$ or $\text{Si}_{\text{sub.2}}\text{H}_{\text{sub.6}}$ is performed as a technique of doping at least the second crystalline material with Si.

53. (Currently Amended) A method of manufacturing a plasma display panel, comprising steps of:

forming a first substrate;

forming a protective layer on the first substrate, including a first crystal and a second
5 crystal exposed to the discharge space, the second crystal being dispersed throughout the first
crystal at the surface of the protective layer, the first crystal is formed mainly from MgO, and
fine MgO crystalline particles are used as the second crystal crystalline material; and

sealing the first substrate and a second substrate together via a discharge space with the
protective layer facing into the discharge space, the first and the second substrates being sealed
10 around a perimeter thereof;

wherein the first crystal is formed by way of a thin film technique.

54. (Currently Amended) A method of manufacturing a plasma display panel,
comprising steps of:

forming a first substrate;

forming a protective layer on the first substrate, including a first crystal and a second
5 crystal exposed to the discharge space, the second crystal being dispersed throughout the first
crystal at the surface of the protective layer, the first crystal is formed mainly from MgO, and
fine MgO crystalline particles are used as the second crystal crystalline material; and

sealing the first substrate and a second substrate together via a discharge space with the
protective layer facing into the discharge space, the first and the second substrates being sealed
10 around a perimeter thercof;

wherein the first crystal is formed at least by way of vacuum deposition, electron beam
deposition or sputtering.

55. (Previously Presented) A method of manufacturing a plasma display panel according to claim 54, wherein the first substrate and the second substrate are sealed together via a discharge space with the first crystal and the second crystal being exposed to the discharge
5 space.